WEST

Freeform Search

Database: US Patents Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Term: printer same vertical same test adj pattern

Display: 10 **Documents in Display Format:** TI **Starting with Number** 1

Generate: ○ Hit List ◉ Hit Count ○ Image

Search | Clear | Help | Logout | Interrupt

Main Menu | Show S Numbers | Edit S Numbers | Preferences

Search History

Today's Date: 7/11/2000

DB Name	Query	Hit Count	Set Name
USPT,JPAB,EPAB,DWPI,TDBD	printer same vertical same test adj pattern	22	L3
USPT,JPAB,EPAB,TDBD,DWPI	('5995713' '5995713' '5927208' '5723211' '5644344' '5619307' '5812177' '5649073' '5815187' '5474288' '5534895' '5559951' '5488690' '5564117' '5451990' '5347369' '5265209' '5297017' '5289208' '5113488' '5122884' '5250956' '4878063' '4577197' '4620198' '4709246' '4449052' '4179732' 'JP405297675A' '4179732' 'JP363076571A' 'JP361121664A' 'JP363076571A' 'JP363076571A' 'JP361121664A' 'EP000540243A2' 'EP000540244A2' 'EP000540245A2' 'EP000622238A2' 'JP363076571A' 'JP361121664A' 'EP000540243A2' 'EP000540244A2' 'EP000540245A2' 'EP000622238A2' 'NB9011274' 'NN87055404' 'NN911055' 'NN880338' 'NN78122696' 'NN78122696' 'EP 622237A' 'EP 589718A' 'NN78122696' 'EP 622237A' 'EP 589718A' 'NN78122696' 'EP 540243A' 'EP 540245A')[ABPN1,PN,TBAN,WKU]	83	L2
USPT,JPAB,EPAB,DWPI,TDBD	printer same vertical same test	136	L1

WEST

Freeform Search

Database: US Patents Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Term:

Display: 10 **Documents in Display Format:** TI **Starting with Number** 1

Generate: ○ **Hit List** ◉ **Hit Count** ○ **Image**

Search | Clear | Help | Logout | Interrupt

Main Menu | Show S Numbers | Edit S Numbers | Preferences

Search History

Today's Date: 7/12/2000

DB Name	Query	Hit Count	Set Name
USPT,JPAB,EPAB,TDBD,DWPI	('6076915' 'EP 978390A')[ABPN1,PN,TBAN,WKU]	2	L13
USPT,JPAB,EPAB,DWPI,TDBD	l11 same l6	7	L12
USPT,JPAB,EPAB,DWPI,TDBD	l10 near2 l2	198	L11
USPT,JPAB,EPAB,DWPI,TDBD	var$6	2059522	L10
USPT,JPAB,EPAB,DWPI,TDBD	l4 not l5	102	L9
USPT,JPAB,EPAB,DWPI,TDBD	l7 same l2	4	L8
USPT,JPAB,EPAB,DWPI,TDBD	l1 near l6	28589	L7
USPT,JPAB,EPAB,DWPI,TDBD	align$4	989440	L6
USPT,JPAB,EPAB,DWPI,TDBD	l1 same l2 same l3	24	L5
USPT,JPAB,EPAB,DWPI,TDBD	l1 same l2 and l3	126	L4
USPT,JPAB,EPAB,DWPI,TDBD	printer$1	304385	L3
USPT,JPAB,EPAB,DWPI,TDBD	test$3 near (plot$1 or pattern$1)	16506	L2
USPT,JPAB,EPAB,DWPI,TDBD	vertical or subscan$3	1383879	L1

WEST

Generate Collection

L5: Entry 24 of 24 File: DWPI Feb 20, 1997

DERWENT-ACC-NO: 1994-103301
DERWENT-WEEK: 199713

TITLE: User interactive multiple-pen ink jet printer alignment method - printing stored alignment patterns with two pens to produce superposed patterns, and user selects best set numbers for printing with second pen

ABTX:
The printer prints stored horizontal and vertical alignment test patterns, including superposed patterns of spaced linear segments (K) and progressively offset, spaced linear segments (M), that illustrate a range of alignment options indicated by printed symbolic indicia (1,2,3,4,5,6,7). The user examines the printout, selects desired alignments and strikes selected ones of the indicated keys. The resulting timing between ink jet firing and pixel shifting produce horizontal and vertical alignments respectively.

L5: Entry 20 of 24 File: TDBD May 1, 1987

TDB-ACC-NO: NN87055404

DISCLOSURE TITLE: Bidirectional Printer Alignment Test Pattern

PUBLICATION-DATA:
IBM Technical Disclosure Bulletin, May 1987, US

VOLUME NUMBER: 29
ISSUE NUMBER: 12
PAGE NUMBER: 5404 - 5405

PUBLICATION-DATE: May 1, 1987 (19870501)

CROSS REFERENCE: 0018-8689-29-12-5404

DISCLOSURE TEXT:

- This article describes an efficient test pattern for checking dot alignment in dot matrix printers, especially in a bidirectionally printing dot matrix printer having a reciprocating print head. Dots printed from one direction must be horizontally aligned with dots printed from the other. In bidirectional printers, a controller synchronizes dot printing with the print head position. The placement of dots on the page can be horizontally adjusted by varying the timing, commonly by changing switch settings. The number of switches depends on the desired range and granularity of adjustment. For example, three switches provide eight adjustment settings if each switch represents one binary bit (see Fig. 2). The binary code is sensed by the controller and scaled to represent a time adjustment value. If the binary code represents a twos complement number, the adjustment can be positive or negative, permitting left or right adjustment of the dot locations from their nominal position. ***** SEE ORIGINAL DOCUMENT ***** Usually, the switch setting is done by trial and error; the switch settings are changed, and then a print sample is examined to decide whether the settings are correct. If the setting is incorrect, there is no indication of how to improve the setting. Also, this process is not easily automated. Selection of a switch setting can be simplified by means of the test pattern described below which can be automated. In a special test mode, the printer prints an internally generated test pattern, such as that shown in Fig. 1. The test pattern consists of nine rows of one-dot-wide vertical bars, double spaced. The vertical bars are printed with some dots printed while the head is moving from left to right and, some, from right to left. The first row represents the bidirectional alignment with the present switch setting. This row may be examined manually or by optical scanning equipment to determine whether the present setting meets an alignment specification. This permits a fast test to determine whether any adjustment is necessary. As the following eight rows are printed, the controller ignores the actual switch setting, successively simulating one of the eight possible switch settings for each row. An alignment code, corresponding to the switch setting value simulated during the printing of that row, is printed adjacent to each of the eight rows. The row with the minimum bidirectional error indicates the proper setting of the switches. Bidirectional error is determined by the straightness of the edges of the vertical bars. This can be easily judged by a human operator. Automated equipment, such as an optical scanner, can also be used to determine the straightness of each vertical bar. The switches are then set according to the alignment code for the row containing the straightest bars. The entire process can be automated if equipment is directed by the output of an optical scanner to set the switches correctly.

exempt from FOIA disclosure per 5 U.S.C. 552(b)(4) and protected under the Trade Secrets Act, 18 U.S.C. 1905.

L5: Entry 20 of 24 File: TDBD May 1, 1987

TDB-ACC-NO: NN87055404

DISCLOSURE TITLE: Bidirectional Printer Alignment Test Pattern

PUBLICATION-DATA:
IBM Technical Disclosure Bulletin, May 1987, US

VOLUME NUMBER: 29
ISSUE NUMBER: 12
PAGE NUMBER: 5404 - 5405

PUBLICATION-DATE: May 1, 1987 (19870501)

CROSS REFERENCE: 0018-8689-29-12-5404

DISCLOSURE TEXT:

- This article describes an efficient test pattern for checking dot alignment in dot matrix printers, especially in a bidirectionally printing dot matrix printer having a reciprocating print head. Dots printed from one direction must be horizontally aligned with dots printed from the other. In bidirectional printers, a controller synchronizes dot printing with the print head position. The placement of dots on the page can be horizontally adjusted by varying the timing, commonly by changing switch settings. The number of switches depends on the desired range and granularity of adjustment. For example, three switches provide eight adjustment settings if each switch represents one binary bit (see Fig. 2). The binary code is sensed by the controller and scaled to represent a time adjustment value. If the binary code represents a twos complement number, the adjustment can be positive or negative, permitting left or right adjustment of the dot locations from their nominal position. ***** SEE ORIGINAL DOCUMENT ***** Usually, the switch setting is done by trial and error; the switch settings are changed, and then a print sample is examined to decide whether the settings are correct. If the setting is incorrect, there is no indication of how to improve the setting. Also, this process is not easily automated. Selection of a switch setting can be simplified by means of the test pattern described below which can be automated. In a special test mode, the printer prints an internally generated test pattern, such as that shown in Fig. 1. The test pattern consists of nine rows of one-dot-wide vertical bars, double spaced. The vertical bars are printed with some dots printed while the head is moving from left to right and, some, from right to left. The first row represents the bidirectional alignment with the present switch setting. This row may be examined manually or by optical scanning equipment to determine whether the present setting meets an alignment specification. This permits a fast test to determine whether any adjustment is necessary. As the following eight rows are printed, the controller ignores the actual switch setting, successively simulating one of the eight possible switch settings for each row. An alignment code, corresponding to the switch setting value simulated during the printing of that row, is printed adjacent to each of the eight rows. The row with the minimum bidirectional error indicates the proper setting of the switches. Bidirectional error is determined by the straightness of the edges of the vertical bars. This can be easily judged by a human operator. Automated equipment, such as an optical scanner, can also be used to determine the straightness of each vertical bar. The switches are then set according to the alignment code for the row containing the straightest bars. The entire process can be automated if equipment is directed by the output of an optical scanner to set the switches correctly.

exempt from FOIA disclosure per 5 U.S.C. 552(b)(4) and protected under the Trade Secrets Act, 18 U.S.C. 1905.